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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/762,153	02/01/2001	Katsuhiko Torii	2842.02US01	1357

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EXAMINER

JOYCE, WILLIAM C

ART UNIT

PAPER NUMBER

3682

DATE MAILED: 02/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/762,153

Applicant(s)

TORII ET AL.

Examiner

William C. Joyce

Art Unit

3682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 53-109 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 53-64, 69-72, 74-86, 91, 92 and 97-109 is/are rejected.
- 7) ☒ Claim(s) 65-68, 73, 87-90 and 93-96 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

This Office Action is in response to the amendment filed December 2, 2002 for the above identified patent application.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 69 and 91 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claims 69 and 91, the limitation "the clutch housing unremovably accommodates the driving rotor, the driven rotor, and the lock member" is not fully understood and therefore the metes and bounds of the limitation cannot be ascertained. It is understood the clutch housing *removably* accommodates the rotors and the lock member and therefore the rotors and the lock member can be disassembled from the clutch housing.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that forms the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 53-57, 61, and 62 are rejected under 35 U.S.C. 102(b) as being anticipated by Profet (US Patent 3,559,499).

Profet discloses a mechanical actuator comprising a motor (14), an output unit (22, 24) coupled to the motor, the output unit having a worm gear drive (74, 76) for transmitting rotation of the motor to the driven device, a housing (12, 66) for accommodating the worm drive, a clutch (38, 54, 56) located between the rotating shaft of the motor and the worm drive, the clutch being configured as a compensating mechanism so as to compensate the misalignment between the rotating shaft and the worm shaft, wherein the clutch allows the transmission of rotation from the motor to the worm drive and blocks transmission from the worm drive to the motor.

The actuator further comprising: a clutch housing (12) fixed to a unit housing, a driving rotor (38) coupled to the motor, a driven rotor (54) coupled to a worm shaft of the worm drive, a lock member (56) for selectively allowing and blocking the rotation of the driven rotor.

5. Claims 106-109 are rejected under 35 U.S.C. 102(b) as being anticipated by Leu (US Patent 3,110,381).

Leu discloses a mechanical actuator comprising a motor (1), an output unit coupled to the motor, the output unit having a worm gear drive (8,9) for transmitting rotation of the motor to the driven device, a housing for accommodating the worm drive, a clutch (19,20) located between the rotating shaft of the motor and the worm drive, the clutch having a plurality of rolling bodies (27,28), wherein the clutch allows the

transmission of rotation from the motor to the worm drive and blocks transmission from the worm drive to the motor.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 58-60, 63, 64, 69, 70, 76-86, 91, 92, and 97 are rejected under 35 U.S.C. 103(a) as being unpatentable over Profet (US Patent 3,559,499) in view of Adam et al. (US Patent 4,713,568).

Profet does not clearly show the details of the motor, such as having a commutator or a brush holder, but providing a motor having the claimed features was known in the art. For example, the prior art to Adam et al. teaches the claimed commutator and brush holder. It would have been obvious to one of ordinary skill in the art at the time the invention was made to configure the motor of Profet with the claimed motor features, as taught by Adam et al., motivation being to provide a simple and well known motor for driving the actuating mechanism.

With respect to claims 63 or 85, Profet does not teach forming the driven rotor integrally with the worm shaft. It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the driven rotor integrally with the worm shaft, since it has been held that forming in one piece an article which has formally been

formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893).

With respect to claims 64 or 86, Profet does not show a bearing attached to the clutch housing (12) for supporting the rotating shaft of the motor, but it is understood that the motor is configured with bearings for supporting the rotating shaft. Accordingly, the bearings supporting the rotating shaft are attached to the clutch housing inasmuch as applicant's bearing illustrated in Figure 1 is attached to the clutch housing.

Alternatively, the prior art to Adam et al. teaches the claimed bearing for supporting the rotating shaft.

With respect to claims 70 or 92, Profet does not disclose the materials used in manufacturing the rotors. It would have been obvious to one of ordinary skill in the art to form the rotors from the claimed materials, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

With respect to claims 76 or 97, Profet does not disclose the actuator used in combination with a lifting mechanism for displacing a windowpane, however it was known in the art to use an actuator for displacing a windowpane (see instant specification). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the actuator of Profet for displacing a window pane, motivation being to provide a mechanized windowpane device which is easily displaced by an operator.

8. Claims 71, 72, 74, 75, 100-105 are rejected under 35 U.S.C. 103(a) as being unpatentable over Profet (US Patent 3,559,499) in view of Schubel (US Patent 2,456,998).

Profet does not teach a ball positioned between the rotating shafts and/or rotors, but Schubel teaches a ball (28) used to axially support two relatively rotating components. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the actuator of Profet with a ball positioned between the rotors and/or rotating shafts, as taught by Schubel, in order to better support the relatively rotating components from axial movement.

9. Claims 98 and 99 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leu (US Patent 3,110,381) in view of Boyden (US Patent 3,243,023).

Leu does not disclose the clutch being configured so that the driving rotor directly engages the driven rotor. The prior art to Boyden teaches a known clutch having a driving rotor (31) configured to directly engage a driven rotor (38) for transmitting torque from an input shaft (14) to an output shaft (15). It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the clutch of Leu with the clutch of Boyden, motivation being to provide an improved clutch having an increased locking capacity, increased balancing effect, and improved lubricating means.

Response to Arguments

10. Applicant's arguments filed 12/2/02 have been fully considered but they are not persuasive. It is understood that the clutch of Profet is configured such that it inherently compensates for misalignment between the rotating shafts.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

-Note the actuator having a clutch of Spraragen ('020).

-Note the clutches of Tsai ('021) and Jones ('254).

-Note the motor structure of Miyazaki et al. ('221).

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

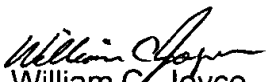
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Joyce whose telephone number is (703) 305-5114. The examiner can normally be reached on Monday - Thursday 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bucci can be reached on (703) 308-3668. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7687 for regular communications and (703) 305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.


William C. Joyce
February 20, 2003